

IP-427

S-E-C-R-E-T

CENTRAL INTELLIGENCE AGENCY
Office of the Chief, Economic Research
Office of Research and Reports

Project Action Memorandum

Project No. 20.1030
Date: 20 January 1956

TITLE: Free World versus Sino-Soviet Bloc Energy Availability

REQUESTER: DCI

STATEMENT OF THE PROBLEM AND TERMS OF REFERENCE:

Problem: To compare energy availability in the US and USSR and in the Free World and Sino-Soviet Bloc, stressing relative rates of growth.

Terms of Reference: The project will result in a memorandum to the DCI with accompanying page-size charts.

RESPONSIBILITY:

	<u>Man-hours</u>	<u>Due Dates</u>	<u>Concurrence (Initials)</u>
<u>Action Division:</u> D		25 Jan 56	TH
<u>Branches:</u> M	100		
M	75	24 Jan 56	
M	75	24 Jan 56	
<u>Staff:</u> ST			PR
<u>Principal Analyst:</u>	x3843		
<u>Project Monitor:</u>	x2803		

This project will delay completion of Projects 25.676, 25.683 and 10.803 by one week each.

The classification of this project will be no higher than SECRET.

APPROVED Ela Ch/E

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Table 1. Primary Energy Production for Selected Years and Growth Rates for Selected Periods
Sino-Soviet Bloc VS. Free World by Principal Regions and Categories

Trillions of BTU (1940-1960)

Item No.	Region and Category	1940 Production	1946 Production	Aver. Ann. Growth, % 1941-46	1950 Production	Aver. Ann. Growth, % 1947-50	1955 Production	Aver. Ann. Growth, % 1951-55	1960 Production (Plan or Forecast)	Aver. Ann. Growth, % 1956-60
I Sino-Soviet Bloc										
1.	USSR - Total	7,016	6,198	-2.1	9,693	11.8	13,760	7.3	22,610	10.4
a.	Solid fuels	5,510	5,080	-1.4	7,770	11.2	10,230	5.7	15,030	8.0
b.	Oil and gas	1,490	1,100	-4.9	1,880	15.0	3,450	12.9	7,380	16.4
c.	Hydroelectric power	16	18	2	43	22	80	13.2	200	20.2
2.	European Satellites - Total	5,304	3,803	-5.4	5,383	9.1	7,604	7.1	9,930	5.5
a.	Solid fuels	4,960	3,450	-5.9	4,930	9.3	6,660	6.2	8,750	5.6
b.	Oil and gas	340	346	0.3	446	6.6	930	15.8	1,160	4.5
c.	Hydroelectric power	4	7	10	7	0	14	15	20	7.4
3.	Communist China b/	1,500	579	-14.7	1,244	21.1	2,476	14.8	3,820	9.1
a.	Solid fuels	1,490	560	-15.0	1,220	21.5	2,440	14.9	3,700	8.7
b.	Oil and gas	10	4	d/	4	0	20	38	70	28.5
c.	Hydroelectric power	10	15	7	20	7	16	4	50	26
4.	Sino-Soviet Bloc - Total	13,820	10,580	-4.4	16,320	11.4	23,840	7.9	36,360	8.8
a.	Solid fuels	11,960	9,090	-4.5	13,920	11.2	19,330	6.8	27,480	7.3
b.	Oil and gas	1,830	1,450	-3.2	2,330	12.6	4,400	13.5	8,610	14.4
c.	Hydroelectric power	30	40	5	70	15	110	9.5	270	19.7
II Free World										
1.	US - Total	24,810	31,210	3.9	34,320	2.4	38,520	2.3	44,900	3.1
a.	Solid fuels	13,580	15,810	2.6	14,860	-1.5	13,020	-2.6	14,020	1.5
b.	Oil and gas	11,020	15,080	5.4	19,070	6.0	25,050	5.6	30,400	3.9
c.	Hydroelectric power	210	320	7.3	390	5.1	450	2.9	480	1.3
2.	Free World less US - Total	24,000	21,400	-1.9	29,310	8.2	36,760	4.6	45,620	4.4
a.	Solid fuels	20,220	15,750	-4.1	19,060	4.9	20,210	1.2	21,350	1.1
b.	Oil and gas	3,330	5,190	7.7	9,580	16.6	15,490	10.1	22,700	7.9
c.	Hydroelectric power	450	460	0.4	670	9.9	1,060	9.6	1,570	8.2
3.	Free World - Total	48,810	52,610	1.3	63,630	4.9	75,280	3.4	90,520	3.8
a.	Solid fuels	33,800	31,560	-1.1	33,920	1.8	33,230	-0.1	35,370	1.3
b.	Oil and gas	14,350	20,270	5.9	28,650	9.0	40,540	7.2	53,100	5.5
c.	Hydroelectric power	660	780	2.8	1,060	8.0	1,510	7.3	2,050	6.3
III Relationships in the Production of Primary Energy (Percent)										
1.	Sino-Soviet Bloc/Free World	28.3	20.1		25.6		31.7		40.2	
2.	USSR/US	28.3	19.9		28.2		35.7		50.4	

a. For 1940 and 1946, data cover same countries as in 1950, 1955 and 1960.

b. Includes North Korea, Outer Mongolia and Viet Minh.

c. Less than 0.5 trillion BTU.

d. Not computed.

~~8 February 1956~~

The USSR is ^{just} beginning to utilize natural ^{gas} produced
with ~~petroleum~~ ^{oil} rather than waste it. The Sixth Five-Year
Plan calls for increasing natural gas production from 8.1
million metric tons in 1955 ~~11 percent of liquid~~
~~petroleum production~~ to 32 million metric tons in 1960 --
^{equivalent to} ~~equal to~~ one quarter of ^{crude oil} ~~liquid petroleum~~ production. In
contrast, US natural gas production was 200 million metric
tons in 1955 -- ^{equivalent to} ~~over half liquid petroleum~~ production.
~~crude oil~~

TRANSMITTAL SLIP		DATE: 25 Jan 56	
TO: [REDACTED]			
ROOM NO.	BUILDING		
REMARKS:			
<p>Attached are 3 copies of "Energy Availability" draft.</p> <p>Graphics should be completed tomorrow.</p>			
FROM: [REDACTED]			
ROOM NO.	BUILDING	EXTENSION	
		3011	

FORM NO. 241
1 FEB 55

REPLACES FORM 36-8
WHICH MAY BE USED.

(47)

STATINTL

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A significant difference between the US and USSR is in the relative production for use of natural gas. In both countries large quantities of natural gas are withdrawn from underground deposits in the production of oil. In the US nearly all of this gas is now conserved and utilized while in the USSR nearly all of it is wasted. For example in 1955 the ^{production} ratio of natural gas to oil (including natural gas liquids) was 200/365 or 0.55, in the US, while in the USSR this ratio was 8.1/70 or 0.116. The USSR 6th. FY Plan calls for a very large increase in natural gas production, from 8.1 million tons in 1955 to 34 million metric tons in 1960. This can only be accomplished if ^{the} very extensive natural gas trunk lines planned, are actually built.

$$\begin{array}{r}
 32 \\
 \hline
 135 \overline{) 32.00} \\
 \underline{270} \\
 500 \\
 \underline{505} \\
 45 \\
 \hline
 237
 \end{array}$$

$$\begin{array}{r}
 8.1 \\
 \hline
 70 \overline{) 8.1} \\
 \underline{56} \\
 25 \\
 \hline
 0.116
 \end{array}$$

$$\begin{array}{r}
 46 \\
 \hline
 8.1 \times 0.064 \\
 \underline{544} \\
 55.04
 \end{array}$$